

Appendix 2.

Ecological Reference Worksheet

Author(s) / participant(s): Brenda Simpson, Dan Thomas

Contact for lead author : Brenda Simpson

Reference site used? Yes/No

No

Date: 8/1/2005 MLRA: WP-2 Ecological Site: Clayey Bottomland WP This must be verified based on soils and climate (see Ecological Site Description). Current plant community cannot be used to identify the ecological site.

Indicators: For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above and below average years for <u>each</u> community within the reference state, when appropriate & (3) site data. Continue description on separate sheet.	Indicator Weight
1. Number and extent of rills : No rills or past evidence.	1
2. Presence of water flow patterns: No water flow patterns in 1-3% slopes. Slight flow patterns will be evident in slopes greater than 3%.	1
3. Number and height of erosional pedestals or terracettes: No erosional pedestals or terracettes are present.	1
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground) : Bare ground is 18%. Bare areas will be less than 2 feet in size, few and not connected.	1
5. Number of gullies and erosion associated with gullies: Gullies will not exist on the majority of the site. Exception may occur where channeled water enters the site on steeper slopes (3-6%) and where channeled water enters a gully/arroyo. Potential is extreme for gully erosion in these areas if vegetative cover deteriorates.	1
6. Extent of wind scoured, blowouts and/or depositional areas: Blowouts and scour areas will not exist. Very slight deposition in plant crowns.	1
7. Amount of litter movement (describe size and distance expected to travel) : Litter is fine (less than 3/8 inch) and will travel less than one foot.	1
8. Soil surface (top few mm) resistance to erosion (stability) values are averages - most sites will show a range of values for both plant canopy and interspaces, if different): Soil surface stability values range from 1 - 3, averaging 1.8. Only slight difference between interspaces and under plant canopy. Soil properties are effected by salt content, moderately alkaline.	1
9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different) : Soil surface structure is moderate thin platy; A-Horizon is 0-4 inches thick and pale brown (10YR 6/3) in color. SOM content is 3% in the Hickman soil, 0.7 in the Catman soil.	1
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Dominant plant composition of cool and warm season grasses are evenly distributed across the site providing adequate protection in normal climatic years and without significant disturbances. High litter % and gentle slopes help offset the moderately slow permeability.	1
11. Prescence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): Compaction layer is not present. Heavy clay content may give appearance of a compaction layer.	1
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (>>), greater than (>), and equal to (=) : Cool Season > Warm Season >> Shrub > Forbs > Half Shrub. Refer to Appendix 4 for list of species.	1
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence) : New plants, mature plants, and decadence of old plants is proportional to maintaining the dominant species. Cool and warm season grass groups will show normal mortality and decadence. Both groups are susceptible to extended disturbances, especially the cool season.	1
14. Average percent litter cover (30 %) and depth (1.2 inches). Most litter is fine and near the source.	1
15. Expected annual production (this is TOTAL above-ground production, not just forage production): Average TOTAL production is 2248# annually. Low = 1263#. High = 3232#.	1
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do , continue to increase regardless of the management of the site and may eventually dominate the site": None	1
17. Perennial plant reproductive capability : All plants are capable of reproduction. The only limitations are weather related or a natural disease affecting reproduction.	1

Photograph (s)

MLRA	:		Date :	
Ecological Site :				

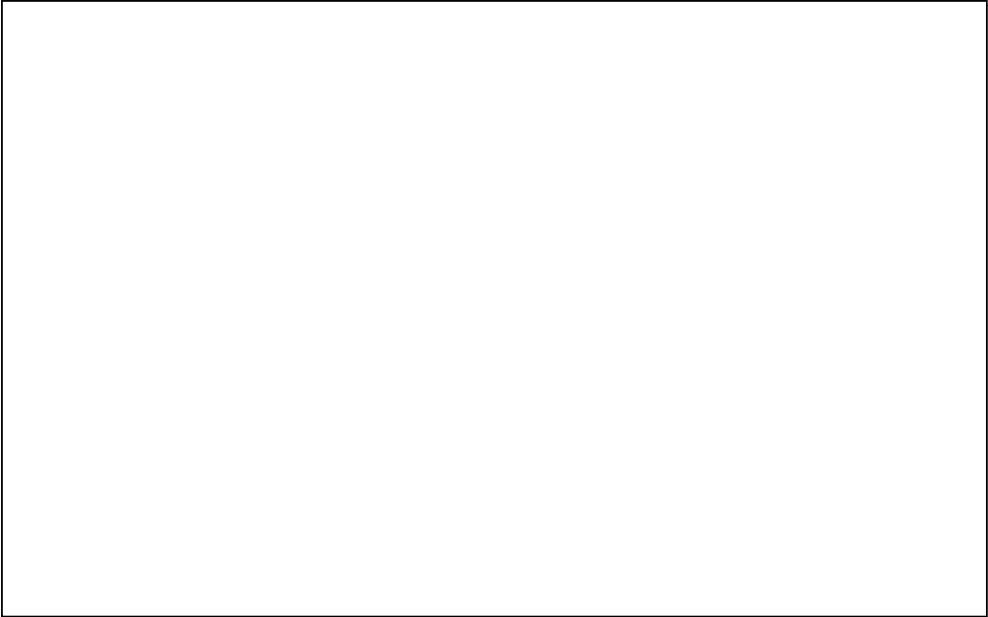


Photo # 1

Comments :	
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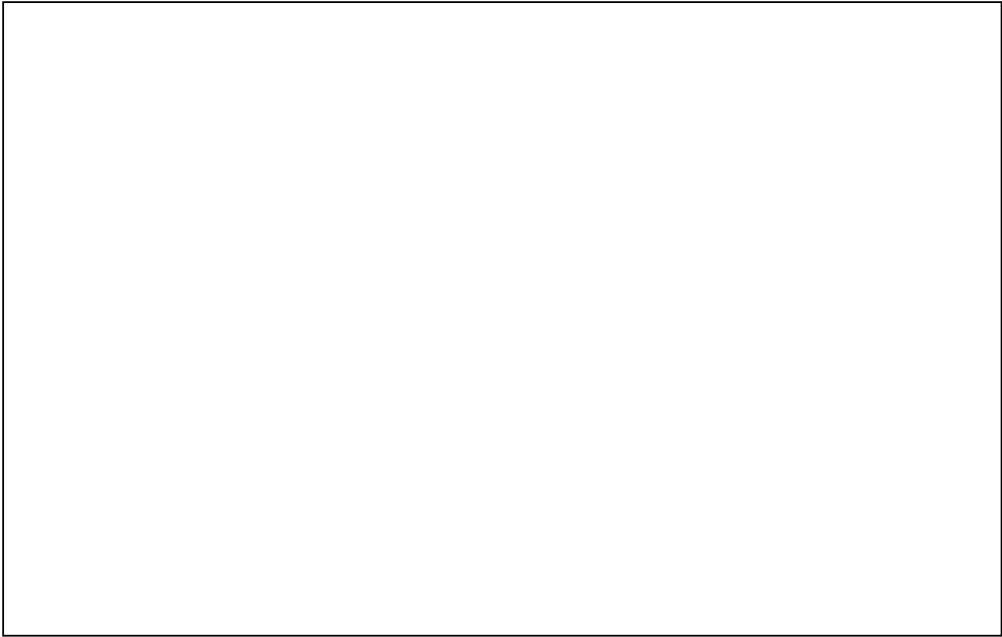


Photo # 2

Comments :	
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Appendix 4.

Functional / Structural Groups Worksheet

State	<u>New Mexico</u>	Office	<u>Grants FO</u>	Ecological Site	<u>Clayey Bottomland WP-2</u>
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Observers	Brenda Simpson, Dan Thomas	Date	8/1/05
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Functional / Structural Groups			Species List for Functional / Structural Groups
Name	Potential ¹	Actual ²	Plant Names
Cool Season	D		Western Wheatgrass
Warm Season	S		Vine Mesquite, Blue Gramma, Alkali Sacaton, Galleta
Shrub	S		Fourwing Saltbush, Rubber Rabbitbrush
Forbs	M		Perennial and Annual Forbs (Annuals dominate)
Half Shrub	M		Winterfat
Biological Crust ³			

Indicate whether each "structural/functional group" is a Dominant (D)(roughly 40-100% composition), a**Sub-dominant (S)** (roughly 10-40%) composition) a**Minor Component (M)** (roughly 20-5% composition), or a**Trace Component (T)** (<2% composition) based on weight or cover composition in the area of interest (e.g., "Actual" column) relative to the "Potential" column derived from information found in the ecological site/description and/or at the ecological reference area.

Biological Crust 3 dominance is evaluated solely on cover not composition by weight